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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,266	02/07/2002	Toshio Morita	Q63212	6691

23373 7590 04/16/2003

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WASHINGTON, DC 20037

EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

4

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

19067266

Applicant(s)

Morita et al

Examiner

J. Gray

Group Art Unit

1774

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-20 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☒ Claim(s) 6-9 is/are allowed.
- ☒ Claim(s) 1-5 and 10-20 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
  - ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

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Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-4, 10, 13-14, and 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically the units of measurement for the amount of boron nitride present, "by mass", is indefinite. Neither the mass of the boron nitride, carbon fiber or combined total is provided, of which a percentage can be determined. Accordingly, the metes and bounds for which patent protection is being sought is not clear.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dasch et al, 5,433,906 (Dasch) or European Patent Publication 583,062 A1 (Harada) each in view of Stempin et al, 5,132,254 (Stempin).

Dasch and Harada each teach vapor grown carbon fibers having a fiber diameter within applicant's claimed range. See Dasch, abstract and Harada, abstract. In addition, Dasch and Harada teach the formation of composite materials comprising a

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synthetic resin, as required by claims 11-24. Harada and Dasch do not teach coating their fibers with boron nitride.

Stempin teaches boron nitride coated fibers and composites formed therefrom, wherein the fibers can be carbon fibers. See abstract. Stempin does not specifically teach vapor grown carbon fibers, nevertheless, he does teach at col. 2, lines 48-53, that applying a boron nitride coating to carbon fibers unexpectedly improves the strength and/or toughness of the resultant composite under stress at high temperatures. This teaching would have provided motivation to one of ordinary skill in the art to modify the carbon fibers of Dasch and Harada by applying a boron nitride coating to improve the strength and toughness of the resultant composite.

Claims 6-9 are allowed.

Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Prior Art shows the general state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. M. Gray whose telephone number is 703-308-2381. The examiner can normally be reached on M - F from 10: 30 am - 7 pm.

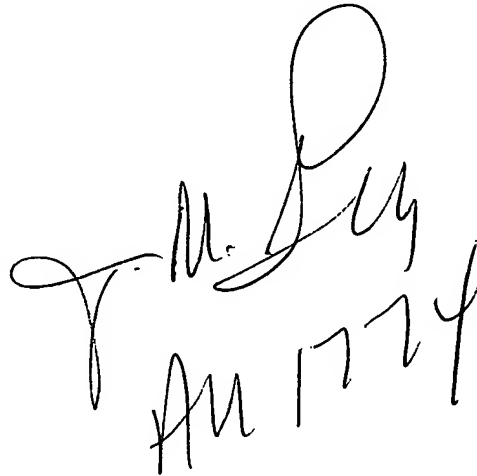
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-308-0051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

J. M. Gray/mn  
April 14, 2003

A handwritten signature in cursive script, appearing to read "J. M. Gray", with "Art 1774" written below it in a similar style.